



Monthly Wholesale Trade

Sales and Inventories

August 1997

BW/97-8

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U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

Sales. August 1997 sales of merchant wholesalers, after adjustment for seasonal variation and trading-day differences but not for price changes, were \$208.8 billion, down 1.1 percent (+/-0.5%) from the revised July level but were 3.0 percent (+/-0.7%) above August 1996. The July preliminary estimate was revised downward by \$0.8 billion or 0.4 percent. August sales of durable goods decreased 2.0 percent (+/-0.6%) from July but were 4.5 percent (+/-2.0%) above August 1996. Compared to last month, sales of lumber and other construction materials were down 2.6 percent and motor vehicles and automotive equipment fell 2.4 percent. Among nondurable goods, paper and paper products increased 4.8 percent above July, while chemicals and allied products declined 4.3 percent from last month.

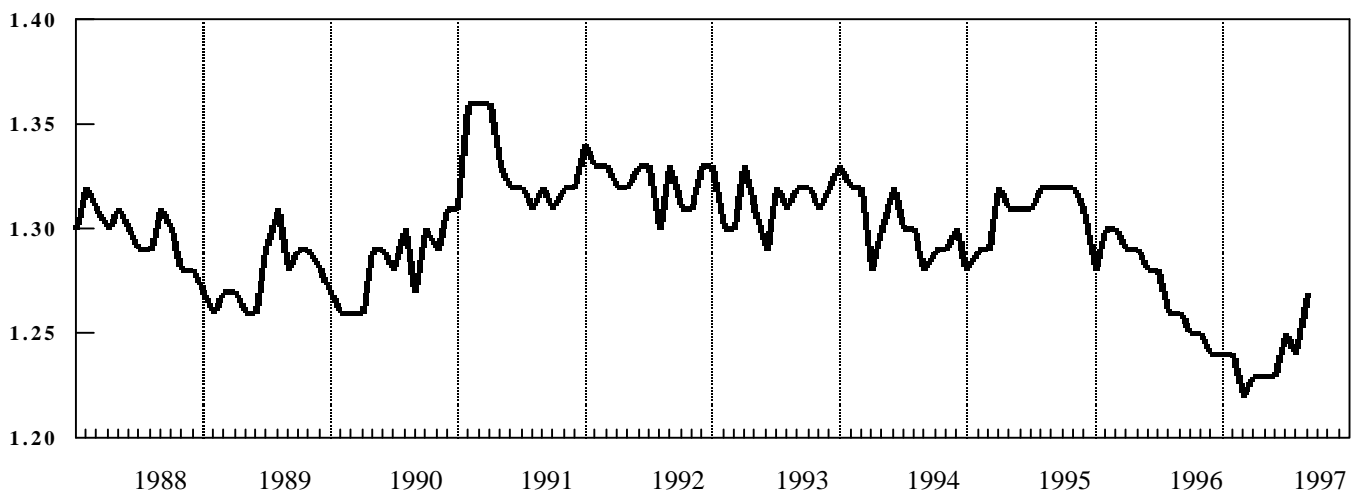
Inventories. Total inventories of merchant wholesalers, after adjustment for seasonal variation but not for price changes, were \$264.8 billion at the end of August, up 1.0 percent (+/-0.3%) from the revised July level and 3.4 percent (+/-2.3%) above August 1996. The July preliminary estimate

was revised downward by \$0.1 billion or 0.1 percent. End-of-month inventories of durable goods wholesalers increased 0.3 percent (+/-0.3%) from last month and were 3.7 percent (+/-3.3%) above August 1996. Compared to last month, inventories of furniture and home furnishings increased 1.3 percent, while machinery equipment and supplies decreased 0.9 percent. End-of-month inventories of nondurable goods increased 2.0 percent (+/-0.5%) from July and were 2.7 percent (+/-2.3%) above last August. Compared to last month, inventories of paper and paper products rose 4.3 percent, while petroleum and petroleum products fell 1.7 percent.

Inventories/Sales Ratio. The August inventories/sales ratio for merchant wholesalers, based on seasonally adjusted data, was 1.27. The August 1996 ratio was 1.26.

Data in this report are based on a sample and, therefore, are subject to sampling and nonsampling variability. A discussion of the reliability of the data and general survey methodology appears in BW/96-RV Current Business Report.

Monthly Inventories/Sales Ratios of Merchant Wholesalers: 1988 to 1997
(Data adjusted for seasonal and trading-day differences, but not for price changes)



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Address inquiries concerning this report to Services Division, Bureau of the Census, Washington, DC 20233, or call Ronald Pienckyoski, (301) 457-2779 or 457-2764. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

This report is available on day of issue through the Department of Commerce's online Economic Bulletin Board (202-482-1986). The data are also available on the internet - <http://www.census.gov/svds/www/mwts.html>.

Table 1. Estimated Monthly Sales, Inventories, and Inventories/Sales Ratios of Merchant Wholesalers: 1997 and 1996

[In millions of dollars]

SIC ¹ code	Kind of business	Sales						Inventories						Inventories/Sales		
		Monthly			Percent change			Monthly			Percent change			ratios		
		Aug. 1997 (p)	Jul. 1997 (r)	Aug. 1996 (r)	Aug./ Jul.	Jul./ Jun.	Aug. 97 Aug. 96	Aug. 1997 (p)	Jul. 1997 (r)	Aug. 1996 (r)	Aug./ Jul.	Jul./ Jun.	Aug. 97 Aug. 96	Aug. 1997 (p)	Jul. 1997 (r)	Aug. 1996 (r)
Adjusted ²																
	U.S. Total	208,774	211,041	202,719	-1.1	0.1	3.0	264,818	262,314	256,189	1.0	-0.7	3.4	1.27	1.24	1.26
50	Durable	108,266	110,498	103,639	-2.0	0.8	4.5	167,732	167,156	161,681	0.3	-1.3	3.7	1.55	1.51	1.56
501	Automotive	17,826	18,269	17,404	-2.4	-2.5	2.4	28,169	27,838	27,442	1.2	-1.5	2.6	1.58	1.52	1.58
502	Furniture	3,335	3,442	3,627	-3.1	-1.1	-8.1	5,170	5,103	5,259	1.3	-1.0	-1.7	1.55	1.48	1.45
503	Lumber	7,336	7,535	7,419	-2.6	0.6	-1.1	8,296	8,293	7,862	0.0	1.0	5.5	1.13	1.10	1.06
504	Prof. equip.	21,241	21,372	19,627	-0.6	-1.7	8.2	23,133	23,221	22,421	-0.4	-0.8	3.2	1.09	1.09	1.14
505	Metals	8,876	8,951	8,232	-0.8	0.6	7.8	13,802	13,735	12,355	0.5	0.2	11.7	1.55	1.53	1.50
506	Electrical	15,227	15,347	14,403	-0.8	2.4	5.7	24,136	24,066	23,093	0.3	-0.2	4.5	1.59	1.57	1.60
507	Hardware	6,291	6,422	5,871	-2.0	1.0	7.2	12,303	12,262	11,683	0.3	-1.7	5.3	1.96	1.91	1.99
508	Machinery	16,192	16,601	15,111	-2.5	2.0	7.2	36,805	37,136	35,616	-0.9	-3.4	3.3	2.27	2.24	2.36
509	Other Durable	11,942	12,559	11,945	-4.9	7.5	0.0	15,918	15,502	15,950	2.7	-0.9	-0.2	1.33	1.23	1.34
51	Nondurable	100,508	100,543	99,080	0.0	-0.6	1.4	97,086	95,158	94,508	2.0	0.5	2.7	0.97	0.95	0.95
511	Paper	7,406	7,067	6,964	4.8	-0.5	6.3	9,523	9,128	8,471	4.3	3.4	12.4	1.29	1.29	1.22
512	Drugs	10,261	10,265	8,585	0.0	3.3	19.5	15,257	14,739	12,928	3.5	1.3	18.0	1.49	1.44	1.51
513	Apparel	7,146	7,429	6,323	-3.8	5.1	13.0	12,694	12,630	11,485	0.5	0.3	10.5	1.78	1.70	1.82
514	Groceries	27,584	27,593	26,680	0.0	-1.1	3.4	17,456	17,301	18,327	0.9	-0.8	-4.8	0.63	0.63	0.69
515	Farm-products	8,768	8,982	11,398	-2.4	-3.9	-23.1	9,532	9,691	10,697	-1.6	2.3	-10.9	1.09	1.08	0.94
516	Chemicals	4,673	4,881	4,573	-4.3	4.0	2.2	4,917	4,974	4,568	-1.1	2.4	7.6	1.05	1.02	1.00
517	Petroleum	15,529	14,955	14,291	3.8	-0.4	8.7	4,896	4,979	5,157	-1.7	-1.1	-5.1	0.32	0.33	0.36
518	Alcohol	4,919	4,824	4,674	2.0	2.7	5.2	4,971	4,872	4,923	2.0	-3.1	1.0	1.01	1.01	1.05
519	Other Nondur.	14,222	14,547	15,592	-2.2	-5.1	-8.8	17,840	16,844	17,952	5.9	-0.5	-0.6	1.25	1.16	1.15
Not Adjusted														Sales to date		
	U.S. Total	208,814	212,966	208,264	-1.9	0.3	0.3	260,204	262,103	251,327	-0.7	0.5	3.5	1,663,785		1,592,016
50	Durable	108,614	111,151	106,886	-2.3	-0.3	1.6	168,161	169,518	162,167	-0.8	0.1	3.7	854,392		817,431
501	Automotive	17,202	18,872	17,352	-8.8	-0.9	-0.9	27,352	27,838	26,646	-1.7	-0.1	2.6	145,174		140,953
502	Furniture	3,362	3,432	3,768	-2.0	-0.1	-10.8	5,366	5,205	5,448	3.1	-0.6	-1.5	27,557		28,261
503	Lumber	8,018	8,176	8,235	-1.9	2.7	-2.6	8,196	8,260	7,760	-0.8	-1.6	5.6	59,345		56,579
504	Prof. equip.	21,220	21,051	20,118	0.8	-4.7	5.5	23,017	23,802	22,331	-3.3	2.8	3.1	164,445		149,538
505	Metals	8,849	8,853	8,438	0.0	-2.7	4.9	13,788	13,886	12,330	-0.7	0.6	11.8	70,203		66,092
506	Electrical	15,425	15,424	14,878	0.0	3.2	3.7	24,764	24,716	23,693	0.2	1.2	4.5	116,332		114,565
507	Hardware	6,480	6,974	6,188	-7.1	3.4	4.7	12,352	12,250	11,741	0.8	-1.7	5.2	49,577		45,669
508	Machinery	15,674	16,551	15,247	-5.3	-0.5	2.8	36,915	37,470	35,758	-1.5	-2.4	3.2	127,858		124,913
509	Other Durable	12,384	11,818	12,662	4.8	2.4	-2.2	16,411	16,091	16,460	2.0	2.7	-0.3	93,901		90,861
51	Nondurable	100,200	101,815	101,378	-1.6	0.9	-1.2	92,043	92,585	89,160	-0.6	1.2	3.2	809,393		774,585
511	Paper	7,665	7,222	7,319	6.1	3.5	4.7	9,171	9,201	8,166	-0.3	6.1	12.3	58,114		54,527
512	Drugs	9,717	10,265	8,362	-5.3	7.2	16.2	14,738	14,562	12,476	1.2	3.5	18.1	76,745		66,258
513	Apparel	7,839	8,112	7,120	-3.4	18.4	10.1	12,999	13,059	11,761	-0.5	1.9	10.5	58,065		48,839
514	Groceries	27,529	28,145	27,400	-2.2	1.8	0.5	16,985	17,232	17,796	-1.4	-0.2	-4.6	218,596		209,407
515	Farm-products	8,119	8,506	10,851	-4.5	-2.0	-25.2	6,787	7,462	7,595	-9.0	0.8	-10.6	75,096		86,202
516	Chemicals	4,682	4,910	4,692	-4.6	0.2	-0.2	4,947	4,929	4,600	0.4	0.4	7.5	37,490		36,007
517	Petroleum	15,715	14,641	14,848	7.3	0.8	5.8	4,999	4,969	5,286	0.6	2.2	-5.4	122,887		113,727
518	Alcohol	5,096	5,191	5,085	-1.8	3.4	0.2	4,986	4,984	4,928	0.0	0.1	1.2	37,082		37,030
519	Other Nondur.	13,838	14,823	15,701	-6.6	-11.1	-11.9	16,431	16,187	16,552	1.5	-1.7	-0.7	125,318		122,588

p Preliminary estimate. r Revised.

1 For a full description of the SIC Codes shown above see the "1987 Standard Industrial Classification Manual" or the Current Business Reports

*Combined Annual and Revised Monthly Wholesale Trade" publication.

2 Data adjusted for seasonal variations and, in the case of sales, also for trading-day differences. See Table 3 for seasonal adjustment factors used.

Table 2. Coefficients of Variation and Standard Error for Sales and Inventories

SIC code	Kind of business	Coefficients of variation for level (x 100)				Standard error for trend				Coefficients of variation for level (x 100)		Standard error for trend
		Preliminary estimates		Final estimates		Ratio of two consecutive months		Year to Year Estimates		Cumulative sales estimates		Current year cumulative to previous
		Sales	Inv	Sales	Inv	Sales	Inv	Sales	Inv	C Y	P Y	year cumulative
		Median	Median	Median	Median	Median	Median	Median	Median			
	U.S. Total	1.1	1.3	1.0	1.4	0.4	0.3	0.9	1.5	1.0	0.8	0.7
50	Durable	2.1	2.2	2.1	2.2	0.6	0.3	1.7	2.3	2.0	1.2	1.4
501	Automotive	4.1	4.1	4.1	3.9	1.3	1.0	3.6	4.0	3.6	2.8	2.8
502	Furniture	5.6	7.2	5.5	7.0	2.5	1.0	4.5	10.7	5.1	3.9	3.9
503	Lumber	5.0	5.2	5.1	5.2	1.5	1.0	5.4	5.5	5.0	2.1	5.1
504	Prof. equip.	5.6	6.8	5.7	7.0	1.5	0.9	4.9	5.1	5.4	3.2	4.3
505	Metals	4.5	9.1	4.5	9.1	1.2	0.8	2.8	10.2	4.5	3.6	2.2
506	Electrical	4.8	4.2	4.7	4.1	1.2	0.5	3.5	2.8	4.6	2.9	3.2
507	Hardware	4.9	4.7	4.9	4.2	1.6	0.5	6.4	4.8	4.5	2.5	5.7
508	Machinery	5.4	4.5	5.6	4.5	1.7	0.5	4.8	5.3	5.5	2.2	4.9
509	Other Durable	4.5	6.6	4.4	6.4	1.6	0.9	2.9	6.0	4.2	3.4	2.0
51	Nondurable	1.9	2.0	1.9	1.9	0.6	0.3	1.3	1.3	1.8	1.3	1.2
511	Paper	3.4	3.6	3.4	3.8	1.0	0.4	2.9	4.0	3.1	4.3	3.0
512	Drugs	5.6	5.2	5.5	5.2	0.5	0.4	3.3	2.3	5.6	4.9	3.4
513	Apparel	4.7	7.6	4.8	7.8	2.3	0.8	4.8	5.6	4.3	2.9	3.4
514	Groceries	3.2	4.7	3.1	4.8	0.8	0.7	2.1	5.0	3.0	2.7	1.8
515	Farm-products	5.0	6.6	5.1	6.7	2.2	1.5	2.9	3.7	4.5	3.7	2.0
516	Chemicals	5.5	5.6	5.5	5.5	1.3	0.5	4.5	4.1	5.5	2.7	4.0
517	Petroleum	5.2	13.9	5.3	14.0	1.0	1.0	3.8	12.7	5.5	4.3	3.5
518	Alcohol	6.4	6.1	6.4	6.1	1.6	1.2	8.0	6.0	6.4	5.0	8.2
519	Other Nondur.	6.0	5.4	5.9	5.7	1.8	1.1	6.4	5.3	5.4	1.9	5.9

Note: The median measures of variability are based on the most recent 9 months of data.

Sample Design and Reliability of Data

There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling.

Sampling errors occur because observations are made on a sample, not on the entire population, and different samples could have led to different estimates. Standard errors and coefficients of variation, as calculated for this report, are measures of sampling variation. The margin of sampling error, as used on page 1, gives a range about the estimate which is a 90% confidence interval. If, for example, the trend estimate is up 1.2% and the standard error is 0.9%, then the margin of sampling error is $\pm 1.65 \times 0.9\%$ or $\pm 1.5\%$, and the 90% confidence interval is -0.3% to +2.7%. If the interval contains 0, it cannot be stated with certainty whether there was an increase or decrease. For monthly level, the coefficient of variation (CV) is given. The resulting confidence interval is the estimated value $\pm 1.65 \times CV \times$ (the estimated value).

Nonsampling errors are usually attributed to many possible sources: (1) coverage error - failure to accurately represent all population units in the sample, (2) inability to obtain information

about all sample cases, (3) response errors, possibly due to definitional difficulties or misreporting, (4) mistakes in recording or coding the data obtained, and (5) other errors of collection or processing, or in imputing for missing or inconsistent data. Coverage error has an effect on the accuracy of estimates for this survey to the extent that the administrative records system, which forms the basis of our survey universe frame, does not contain all legal businesses. A major source of nonsampling error in the published estimates is due to the need to impute data for nonrespondents and for late and inconsistent reports. For all kinds of businesses combined, imputed data amount to about 26 percent of the total monthly wholesale sales estimates and 28 percent of the total monthly wholesale inventories estimates.

Nonsampling errors also occur in complete censuses. Although no direct measures of these errors have been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data to minimize their influence.

Official Business

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Table 3. Seasonal Adjustment Factors for Sales and Inventories of Merchant Wholesalers

SIC code	Kind of business	Sales					Inventories							
		1997					1996		1997					1996
		Sep.	Aug.r	Jul.r	Jun.	May	Aug.r	Sep.	Aug.r	Jul.r	Jun.	May	Aug.r	
	U.S. Total ¹	1.024	1.000	1.009	1.007	1.016	1.030	0.978	0.980	0.997	0.985	0.996	0.980	
50	Durable	1.046	1.001	1.012	1.016	1.000	1.030	0.993	1.001	1.013	0.998	1.007	1.001	
501	Automotive	0.973	0.965	1.033	1.016	1.039	0.997	0.972	0.971	1.000	0.986	1.016	0.971	
502	Furniture	1.061	1.008	0.997	0.987	1.010	1.039	1.027	1.038	1.020	1.016	1.007	1.036	
503	Lumber	1.073	1.093	1.085	1.063	1.056	1.110	0.980	0.988	0.996	1.022	1.021	0.987	
504	Prof. equip.	1.065	0.999	0.985	1.016	0.961	1.025	0.976	0.995	1.025	0.989	0.987	0.996	
505	Metals	1.031	0.997	0.989	1.022	1.031	1.025	0.990	0.999	1.011	1.007	1.000	0.998	
506	Electrical	1.098	1.013	1.005	0.997	0.969	1.033	1.006	1.026	1.027	1.013	0.999	1.026	
507	Hardware	1.094	1.030	1.086	1.061	0.996	1.054	1.003	1.004	0.999	0.999	1.019	1.005	
508	Machinery	1.019	0.968	0.997	1.022	1.035	1.009	0.985	1.003	1.009	0.999	1.013	1.004	
509	Other Durable	1.094	1.037	0.941	0.988	0.962	1.060	1.024	1.031	1.038	1.002	1.004	1.032	
51	Nondurable	0.995	0.997	1.015	0.998	1.029	1.027	0.953	0.943	0.969	0.964	0.974	0.943	
511	Paper	1.024	1.035	1.022	0.982	0.969	1.051	0.968	0.963	1.008	0.982	0.989	0.964	
512	Drugs	1.030	0.947	1.000	0.964	0.967	0.974	0.985	0.966	0.988	0.967	0.947	0.965	
513	Apparel	1.124	1.097	1.092	0.969	0.844	1.126	1.019	1.024	1.034	1.018	0.971	1.024	
514	Groceries	0.997	0.998	1.020	0.991	1.040	1.027	1.015	0.973	0.996	0.990	0.985	0.971	
515	Farm-products	0.924	0.926	0.947	0.928	1.003	0.952	0.714	0.712	0.770	0.782	0.876	0.710	
516	Chemicals	0.993	1.002	1.006	1.044	1.063	1.026	0.995	1.006	0.991	1.010	1.008	1.007	
517	Petroleum	0.980	1.012	0.979	0.967	1.025	1.039	1.019	1.021	0.998	0.965	1.006	1.025	
518	Alcohol	0.984	1.036	1.076	1.069	1.081	1.088	1.043	1.003	1.023	0.990	0.982	1.001	
519	Other Nondur.	0.975	0.973	1.019	1.088	1.138	1.007	0.921	0.921	0.961	0.973	1.022	0.922	



r Revised

¹ Adjusted sales and inventories data shown in table 1 are obtained by dividing the unadjusted data by the adjustment factors shown above for the corresponding group. Adjusted data for the totals are obtained by adding the durable and nondurable goods. Seasonal factors shown for the totals will provide an approximation of the adjusted estimates, but may show small differences from the published data.

Note: The seasonal factors shown have been computed based on monthly estimates through the current month preliminary estimates.